

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
22 July 2004 (22.07.2004)

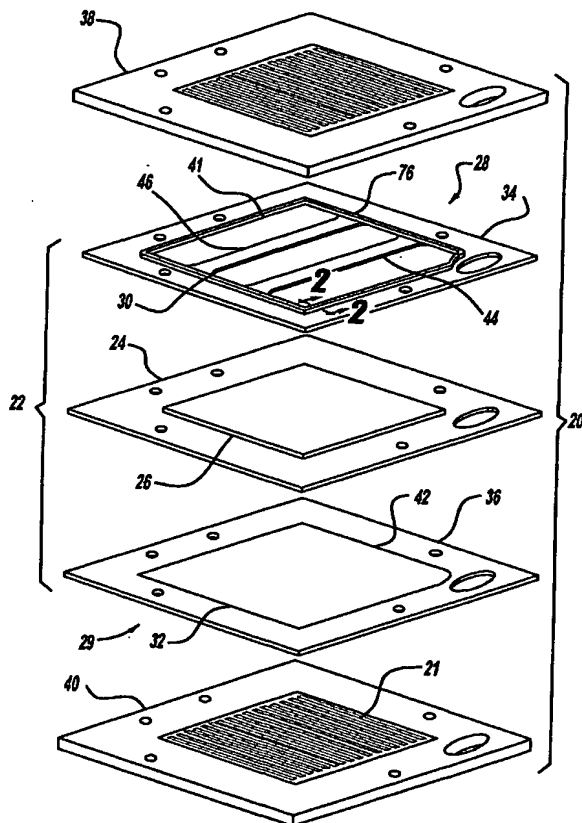
PCT

(10) International Publication Number  
**WO 2004/061338 A1**

- (51) International Patent Classification<sup>7</sup>: **F16J 15/02**,  
H01M 2/14, 08/02
- (21) International Application Number:  
PCT/US2003/041287
- (22) International Filing Date:  
23 December 2003 (23.12.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/437,540 31 December 2002 (31.12.2002) US
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR,  
CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,  
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU,  
SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,  
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: FUEL CELL SEAL WITH INTEGRAL BRIDGE



(57) Abstract: The invention is drawn to a gasket (34) for use in an individual fuel cell (20). The gasket (34) includes at least one generally rigid bridge (44) or (46) that extends across the fluid flow channels in adjacent separator plates (38) and (40). The bridge (44) or (46) assures that the fluid flow channels are not blocked or restricted in the cell (20). Each bridge (44) or (46) may be integral with its corresponding gasket (34). The gasket (34) may be a multi-piece gasket with a carrier material having an elastometric seal portion (74) secured to it.



(84) **Designated States (regional):** ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD,

**Published:**

- with international search report
- with amended claims

**Date of publication of the amended claims:** 7 October 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## AMENDED CLAIMS

1620 Rec'd PCT/PTO 30 JUN 2005

[received by the International Bureau on 23 August 2004 (23.08.04)  
original claims 1-11 have been cancelled, 12-17 have been added. ]

## CLAIMS

What is claimed is:

- 1-11. Cancel.
12. A sealing arrangement for a fuel cell, comprising:
- 5 a membrane electrode assembly having a first side and a second side;  
a gas diffusion layer disposed on at least one of said first and second  
sides of said membrane electrode assembly;  
a separator plate including a first set of flow channels, said separator  
plate being disposed next to said gas diffusion layer; and
- 10 a gasket disposed between said membrane electrode assembly and said  
separator plate and having an outer perimeter portion defining an opening which  
receives said gas diffusion layer, said gasket including at least one bridge portion  
extending across said opening and between said gasket and said separator plate.
- 15 13. The sealing arrangement according to claim 12, wherein said at least  
one bridge portion includes a rigid insert.
14. The sealing arrangement according to claim 12, wherein said at least  
one bridge portion is integrally formed with said outer perimeter portion.
- 20 15. The sealing arrangement according to claim 12, wherein said gasket  
includes a carrier layer and an elastic seal layer mounted thereto.
16. The sealing arrangement according to claim 15, wherein said carrier is
- 25 adhesively bonded to said membrane electrode assembly.
17. The sealing arrangement according to claim 12, wherein said gasket  
includes an elastomeric sealing bead engaging said separator plate.
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